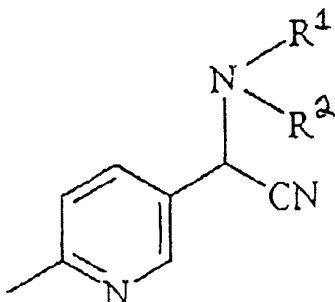


I

comprising initially reacting 2-methyl-5-vinylpyridine with ozone and subsequently reducing the ozonized 2-methyl-5-vinylpyridine that is thereby converted into 2-methylpyridine-5-carbaldehyde, reacting 2-methylpyridine-5-carbaldehyde with a dialkylamine and a cyano compound to give an N,N-dialkylamino-(6-methyl-3-pyridyl)acetonitrile of formula:



III

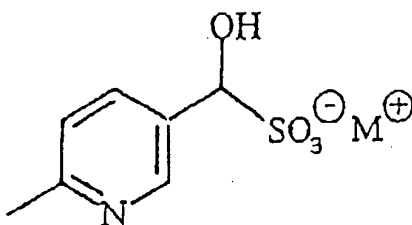
wherein R¹ and R² are identical or different and are C₁₋₄-alkyl, and, finally, in the presence of a base, reacting said acetonitrile of formula III with a 4-(methylsulfonyl)benzyl halide to give 1-(6-methylpyridin-3-yl)-2-[4-(methylsulfonyl)phenyl]ethanone of formula I.

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23. The process as claimed in claim 22, wherein the reaction of 2-methyl-5-vinylpyridine with ozone is carried out in the presence of a mineral acid.

24. The process as claimed in claim 23, wherein the reaction of 2-methyl-5-vinylpyridine with ozone is carried out in the presence of a mineral acid and at a temperature of from -20 °C to 0 °C.

25. The process as claimed in claim 24, wherein the reduction is carried out using an alkali metal hydrogen sulfite, with formation of 1-hydroxy-(6-methylpyridin-3-yl)methanesulfonic acid salt of formula II:



II

wherein M is an alkali metal.

26. The process as claimed in claim 25, wherein the reduction is carried out at a temperature of from -20 °C to 20 °C.

27. The process as claimed in claim 26, wherein the 1-hydroxy-(6-methylpyridin-3-yl)methanesulfonic acid salt is used

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without isolation for preparing the N,N-dialkylamino-(6-methyl-3-pyridyl)acetonitrile of formula III.

28. The process as claimed in claim 27, wherein the cyano compound used in the reaction of the 2-methylpyridine-5-carbaldehyde is an aqueous HCN solution or an aqueous solution of an alkali metal cyanide.

29. The process as claimed in claim 28, wherein the temperature for the reaction of the 2-methylpyridine-5-carbaldehyde with the dialkylamine and the cyano compound is from 0 to 30 °C.

30. The process as claimed in claim 29, wherein the base used in the reaction of the N,N-dialkylamino-(6-methyl-3-pyridyl)acetonitrile of formula III is either an aqueous alkali metal hydroxide solution together with a phase-transfer catalyst or an alkali metal alkoxide in the presence of an organic solvent.

31. The process as claimed in claim 30, wherein the 2-methyl-5-vinylpyridine is obtained using 2-methyl-5-ethylpyridine as starting material.

32. The process as claimed in claim 31, wherein 2-methyl-5-ethylpyridine is converted at from 500 to 700 °C in the presence of a catalyst into 2-methyl-5-vinylpyridine.

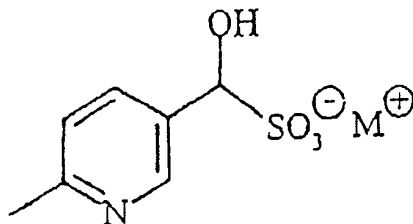
33. The process as claimed in claim 32, where the catalyst used is a member selected from the group consisting of a silica,

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silica gel, iron oxide, zinc oxide, chromium oxide, copper chromite, magnesium oxide, potassium oxide, aluminum oxide, borophosphate, and mixtures thereof, and is on a support or is unsupported.

34. The process as claimed in claim 33, wherein the reaction is carried out at a temperature of from 600 to 700 °C.

35. The process as claimed in claim 22, wherein the reduction is carried out using an alkali metal hydrogen sulfite, with formation of 1-hydroxy-(6-methylpyridin-3-yl)methanesulfonic acid salt of formula II:



II

wherein M is an alkali metal.

36. The process as claimed in claim 35, wherein the reduction is carried out at a temperature of from -20 °C to 20 °C.

37. The process as claimed in claim 36, wherein the 1-hydroxy-(6-methylpyridin-3-yl)methanesulfonic acid salt is used without isolation for preparing the N,N-dialkylamino-(6-methyl-3-pyridyl)acetonitrile of formula III.

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38. The process as claimed in claim 22, wherein the cyano compound used in the reaction of the 2-methylpyridine-5-carbaldehyde is an aqueous HCN solution or an aqueous solution of an alkali metal cyanide.

39. The process as claimed in claim 38, wherein the temperature for the reaction of the 2-methylpyridine-5-carbaldehyde with the dialkylamine and the cyano compound is from 0 to 30 °C.

40. The process as claimed in claim 39, wherein the base used in the reaction of the N,N-dialkylamino-(6-methyl-3-[pyridyl]acetonitrile of formula III is either an aqueous alkali metal hydroxide solution together with a phase-transfer catalyst or an alkali metal alkoxide in the presence of an organic solvent.

41. The process as claimed in claim 30, wherein the 2-methyl-5-vinylpyridine is obtained using 2-methyl-5-ethylpyridine as starting material.

42. The process as claimed in claim 41, wherein 2-methyl-5-ethylpyridine is converted at from 500 to 700 °C in the presence of a catalyst into 2-methyl-5-vinylpyridine.

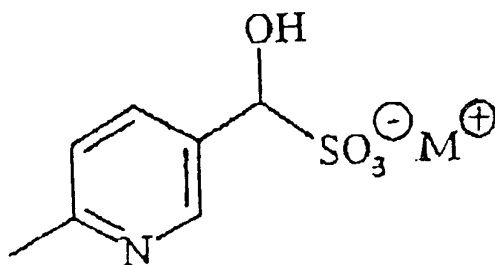
43. The process as claimed in claim 42, wherein the catalyst used is a member selected from the group consisting of a silica, silica gel, iron oxide, zinc oxide, chromium oxide, copper chromite, magnesium oxide, potassium oxide, aluminum

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oxide, borophosphate, and mixtures thereof, and is on a support or is unsupported.

44. The process as claimed in claim 43, wherein the reaction is carried out at a temperature of from 600 to 700 °C.

45. A 1-hydroxy-(6-methylpyridin-3-yl)methanesulfonic acid salt of formula:

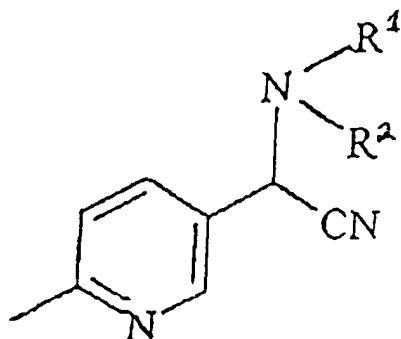


II

wherein M is an alkali metal.

46. A process for preparing a 1-hydroxy-(6-methylpyridin-3-yl)methanesulfonic acid salt as claimed in claim 45, comprising reacting 2-methyl-5-vinylpyridine with ozone subsequently reducing the ozonized 2-methyl-5-vinylpyridine with an alkali metal hydrogen sulfite to convert the reduced, ozonized 2-methyl-5-vinylpyridine into the end product of formula II.

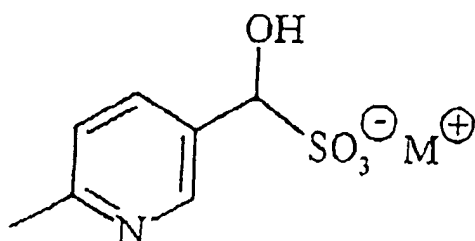
47. An N-N-dialkylamino-(6-methyl-3-pyridyl)acetonitrile of formula:



III

wherein R^1 and R^2 are identical or different and are C_{1-4} -alkyl.

48. A process for preparing an N,N-dialkylamino-(6-methyl-3-pyridyl)acetonitrile of formula III as claimed in claim 47, wherein 2-methylpyridine-5-carbaldehyde or 1-hydroxy-(6-methylpyridin-3-yl)methanesulfonic acid salt of formula II:

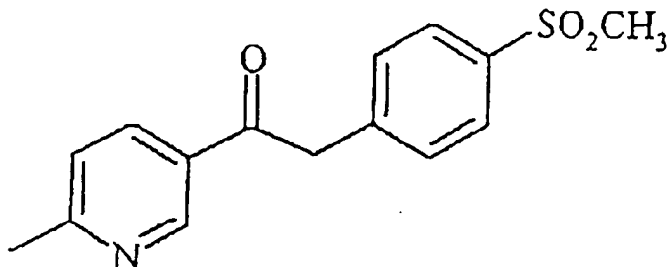


II

is reacted with a dialkylamine and a cyano compound to give the end product of formula III.

49. A process for preparing 1-(6-methylpyridin-3-yl)-2-[4-(methylsulfonyl)phenyl]ethanone of formula:

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comprising:

in a first step (a), converting 2-methyl-5-ethylpyridine at from 500 to 700 °C in the presence of a catalyst into 2-methyl-5-vinylpyridine,

in a second step (b), reacting the 2-methyl-5-vinylpyridine with ozone and, subsequently, reducing the ozonized 2-methyl-5-vinylpyridine to convert it into 2-methylpyridine-5-carbaldehyde,

in a third step (c), converting 2-methylpyridine-5-carbaldehyde using a dialkylamine and a cyano compound into the corresponding N,N-dialkylamino-(6-methyl-3-pyridyl)acetonitrile, and, finally,

in a last step (d), reacting the N,N-dialkylamino-(6-methyl-3-pyridyl)acetonitrile in the presence of a base with a

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4-(methylsulfonyl)benzyl halide to provide 1-(6-methylpyridin-3-yl)-2-[4-(methylsulfonyl)phenyl]ethanone.